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AMENDMENT

TECH CENTER 1600/2900

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Cantel

antibody reactivity compared to the first polypeptide [of interest] , wherein either or both the antibody reactivity and the alteration in the antibody reactivity are associated with an undesirable immune response, and (2) retain at least one [desired] advantageous characteristic of the first polypeptide.

wherein alteration in the antibody reactivity is determined by exposing the mutant polypeptides to [individual] antibodies or antibody fragments that are monospecific for the first polypeptide [of interest] and then screening for retention of the advantageous characteristic.

2. (amended) The method of claim 1 wherein the collection of mutant polypeptides is provided by

mutagenizing nucleic acid encoding [a] the first polypeptide [of interest], and
expressing the mutagenized nucleic acid to produce the collection of mutant polypeptides.

3. (amended) The method of claim 2 wherein the nucleic acid encoding the first polypeptide [of interest] is mutagenized such that a collection of randomly mutagenized nucleic acids is produced which encodes a collection of randomly mutant polypeptides.

Please cancel claim 4.

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5. (amended) The method of claim [2] 1 wherein the antibody reactivity is the undesirable immune response, wherein the undesirable immune response is mediated by the antibody reactivity, [wherein the antibody reactivity is involved in the undesirable immune response, wherein the antibody reactivity is associated with the undesirable immune response,]

or a combination of these.

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9. (amended) The method of claim 8 wherein the antibody reactivity is reactivity to IgE antibodies that are reactive to the first polypeptide [of interest].

10. (amended) The method of claim 9 wherein the [desired] advantageous characteristic is T cell activation.

11. (amended) The method of claim 9 wherein the [desired] advantageous characteristic is an immune characteristic involved in desensitization.

12. (amended) The method of claim 1 wherein identification of mutant polypeptides that have an alteration in antibody reactivity is carried out prior to, simultaneous with, or following identification of mutant polypeptides that retain the [desired] advantageous characteristic.

13. (amended) The method of claim 1 wherein the [desired] advantageous characteristic is a bioactivity present in the first polypeptide [of interest].

Please cancel claim 18.

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21. (amended) The method of claim 20 wherein the first polypeptide [of interest] naturally occurs in non-transgenic animals or plants of the same type as the transgenic animal or plant.

22. (amended) [The] A method of [claim 1 further] altering an antibody mediated or associated reaction in an individual comprising

administering one or more times to an individual one or more polypeptides [each derived from at least one of the identified mutant polypeptides] having altered antibody reactivity while

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amended

retaining desirable characteristics identified by a process wherein a collection of mutant polypeptides is provided, wherein the amino acid sequence of each mutant polypeptide differs in at least one position from a first polypeptide having at least one advantageous characteristic, and identifying those mutant polypeptides within the collection that (1) have an alteration in antibody reactivity compared to the polypeptide of interest, wherein either or both the antibody reactivity and the alteration in the antibody reactivity are associated with an undesirable immune response, and (2) retain at least one advantageous characteristic.

wherein alteration in the antibody reactivity is determined by exposing the mutant polypeptides to antibodies or antibody fragments that are monospecific for the first polypeptide.

Please cancel claims 24-45.

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46. (amended) A method comprising providing a collection of mutant polypeptides wherein the amino acid sequence of each mutant polypeptide differs in at least one position from a first polypeptide [of interest], wherein the polypeptide [of interest] is an allergen, and identifying those mutant polypeptides within the collection that (1) exhibit less of, or have less potential to exhibit, an allergic response than the polypeptide of interest, wherein either or both the antibody reactivity and the alteration in the antibody reactivity are associated with an undesirable immune response, and (2) retain at least one desired characteristic.

47. (amended) The method of claim 46 wherein the collection of mutant polypeptides is provided by